

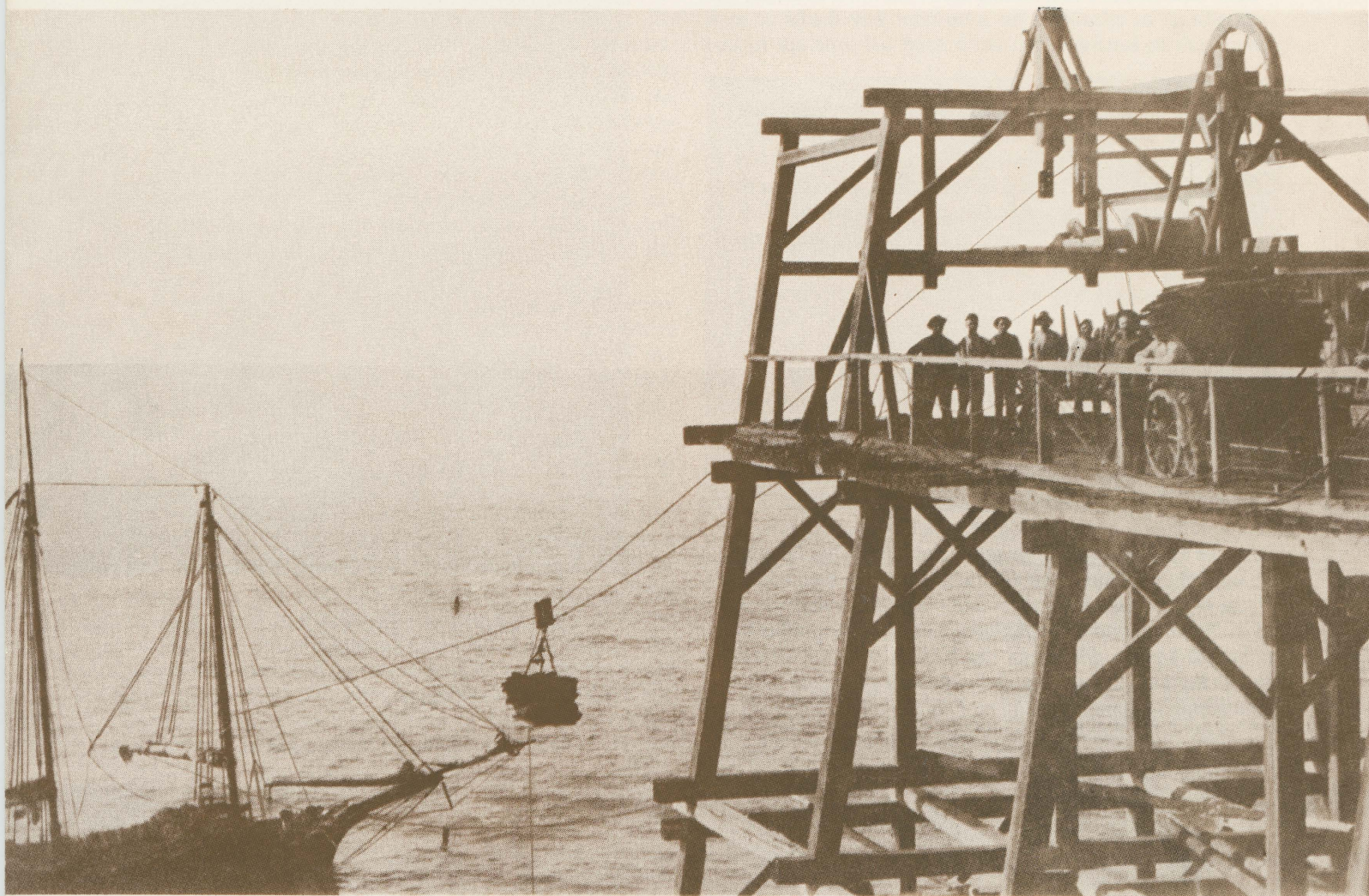
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# SEA LETTER

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*Gualala, the inside chute at Bourn's Landing. Photograph courtesy of Jack Lowe.*

## *Loading by High-Line on the California Coast*

by Richard H. Tooker

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*Correspondence*

# *Loading by High-Line on the California Coast*

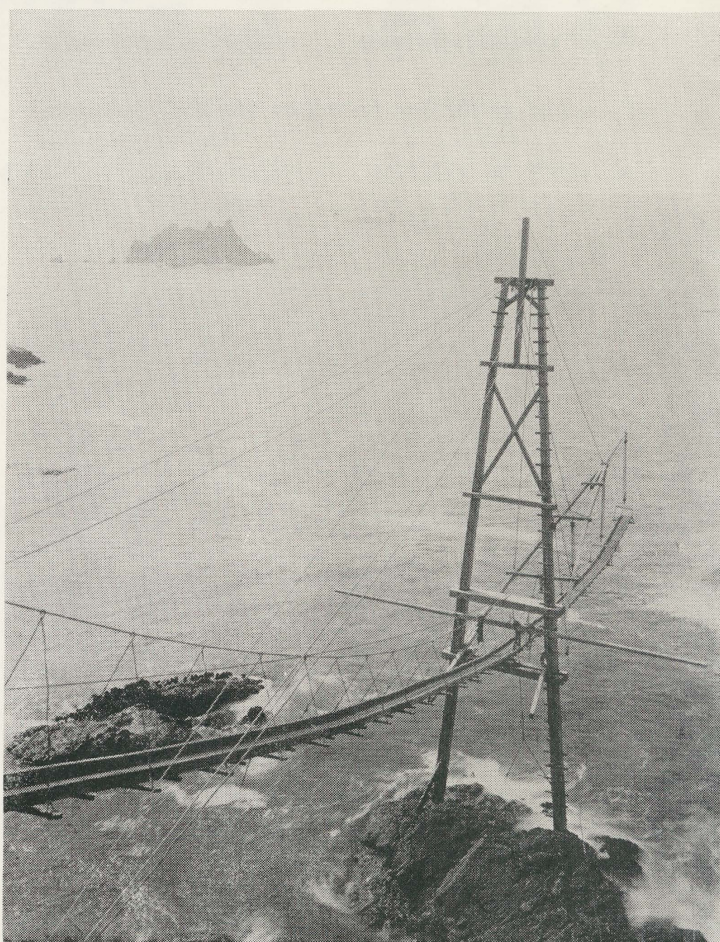
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by Richard H. Tooker

It is no coincidence that the cable car and the wire chute date from the same decade, the 1870s, for it was after the Civil War that wire rope of practical quality became readily available in California. The cable car eased the problem of providing street-railway service up San Francisco's hills, while the wire chute eased the problem of operating a seaport on an open, cliff-lined shore.

California's coast was and still is notoriously poor in harbors, at least by the standards of the Atlantic States. Even worse is the fact that the coast lies under a prevailing wind and swell. Also, many locations of early economic importance, blocked by the Coast Range from easy access to the interior, had a sea front of high bluff and open bay where a wharf simply could not be held for longer than a summer at a time, at best.

At these last-mentioned locations, recourse was had at an early date to the use of glorified playground slides with adjustable aprons at the outer ends; these were the famous slide chutes. They are usually thought of in connection with the north coast of the state, but were also found south of San Francisco as well. Although they were gradually superseded by the wires (as the high-lines were always called), the last slide chute did not disappear until well after 1900.



*Above: The slide chute at Nip and Tuck, August 1886.  
This slide was used for "split-stuff," rather than for lumber.  
Below: The lumber chute at Signal Port.  
Both of these landings were on the coast between  
Gualala and Point Arena.*



When the ready availability of suitable wire rope made high-lines practicable, the question was: Could one be set up in some way at ports where the water was too shallow near shore for a schooner to come close enough to be reached by a slide? There would also be the economic advantage of loading by the sling-load, plus the fact that this style of loading would also cut down the time a vessel had to stay in port at locations where sudden changes in weather could be very troublesome, if not disastrous.

A certain amount of experimenting took place at different locations, but the first widely adopted, practical solution appears to have been worked out by two skilled mechanics of Canadian ancestry who had settled in the Gualala area. They were Will St. Ores and his brother George. Although some of their installations were supplied with power from a small donkey engine, the classic St. Ores wire, as it was used principally in the area between Pt. Arena and the Russian River, was operated without the use of an engine, and it is this form of the wire chute that will now be described.

The location having been chosen from the point of view of the configuration of the shoreline both above and under water, the exact site was picked out at the edge of the bluff. A wide, shallow trench was dug in the ground, running straight back from the edge of the bluff, and a substantial platform was set in place over the trench.

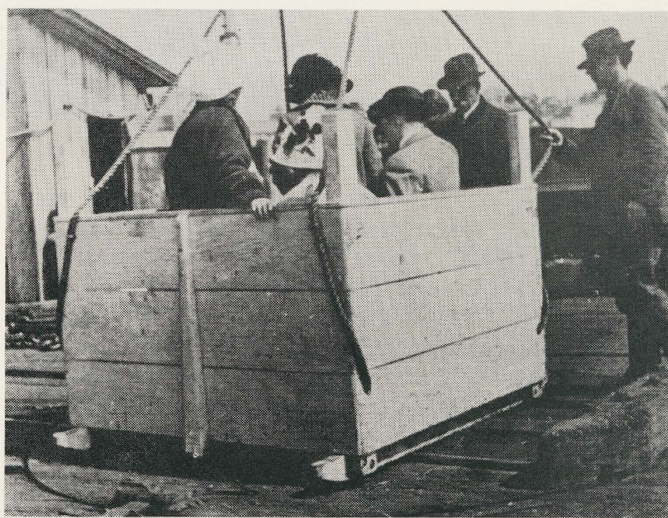
A framework was erected over the platform strong enough to handle the necessary weight and stress. Mounted in the framework and high enough to clear all traffic below it, was a shaft with two drums riding on it. Also mounted in the frame was a sequence of sheaves over which a wire rope could be run from the deadman behind the platform to pass through a wooden block hanging over the outer (sea) end of the platform. Two vertical uprights in the framework made a slide-frame in which the block could move up and down. Handled by a double-block pulley rig, the height of the block (and thus of the wire) over the platform at the front could be adjusted as desired.

The floor was actually in two parts: the platform proper, and the heavy U-shaped section in which it was mounted by means of a heavy hinge at the rear, so that a weight resting on the platform would tip it down. Underneath, a counterweight was rigged so that when there was no weight on the platform the floor would be held level. A heavy handle-beam secured to the platform had a rope led from it which could be taken around a cleat on the forward upright where the chute operator stood. In this way the platform could be held level, even with a weight on it, till the rope was cast off.

The two drums on the overhead shaft were of different sizes. The haul-back line for the traveling sling-carrier that ran on the wire, was taken around the larger drum. Around the smaller drum was wound another line that ran to a counterweight hung from a wire running down the bluff toward the beach. The idea was that the descent of the counterweight would turn the drum-shaft, and bring the empty traveler back from the ship, while the loaded traveler would be heavy enough to drop down the wire to the ship and pull the counterweight back up. The size of the drums was adjusted for the distances involved; typically, the ratio was two to one.

On one occasion, during the first days of Needle Rock landing, some sailors, wishing to amuse themselves by harrassing the chute operators, went ashore late one night and fastened down the counterweight at the beach. There was quite a furor on the landing the next morning before it was finally discovered why the traveler wouldn't go out with a load.

The wire itself had two terminals. The inshore terminal, set well back from the chute frame, was a substantial deadman to which was secured a set of blocks to handle the end of the wire led back from the overhead of the chute



*Above: "The Box" at Mendocino, with passengers ready for the trip out to the waiting steam schooner.*

*Below: A yard employee who has helped with the loading of this steam schooner at Mendocino is coming ashore. The deckload is lashed down and the schooner is about ready to drop the wire.*





frame. The offshore end was a well-anchored heavy mooring. The wire was originally made up in one piece to be hauled out to the schooner, over it, and thence to the mooring chain, but very early it became the usual practice to make the wire up in two parts, inshore and offshore, and to connect them over the ship with a large slip hook fastened to one of the wires, which would hold an eye splice in the other wire. (A slip hook is called a pelican hook today, but this modern name was unknown on the coast.)

When a ship came into the landing, its work boat first went to handle the moorings that held the vessel in the proper position under the wire. Then the offshore part of the wire was fished up by its watchbuoy and hauled on the ship while the workboat went to shore with a hauling line for dragging the inshore part of the wire out to the ship. The two segments were hooked up, and the whole was then hung from the ship's boom so that the wire could be raised and lowered when desired at the ship.

On the landing, the end of the wire was secured at the deadman and the blocks tightened, bringing the wire to its proper tension for operation, and the headblock at the front of the chute was set to hold the wire at the desired height. A load of split stuff or tan bark was then moved out onto the platform to a position under the traveler, and the sling chains would be cast around the load.

This done, the rope holding the platform up was cast off; the hinged section dropped the car from under the load, and gravity took the traveler and its load, which was controlled by a brake mounted on the drum shaft, down to the ship. This brake was worked with a handle that hung down by the chute operator. When the traveler reached the ship, it would be stopped, the slings would be cast off and the load dropped on the deck, and the counterweight would then bring the traveler back to the chute platform for another load.

Such was the back-action wire chute of "firewood landing" fame. A number of them were eventually supplied with steam power and a belt rig to turn the drum shaft for the backline thus dispensing with the counterweight rig, but some of these chutes were never supplied with power.

There was only one real drawback to this arrangement: if for some reason the carrier stopped short of the ship, it couldn't be moved on into position, and the workboat

would have to go out with a hauling line so that it could be pulled to the ship.

However, donkey engines and wire rope were being continually improved, and it soon became possible to obtain engines geared to handle two winch drums. One of the drums could be used to turn a continuous traveler hauling line, so that the traveler could be moved under power in either direction. The other drum could be used to raise and lower the block at the chute head as required, so that when the slings had been thrown around the load, the wire could be raised to bring the load clear, thus dispensing with the need for a dropping hinged platform.

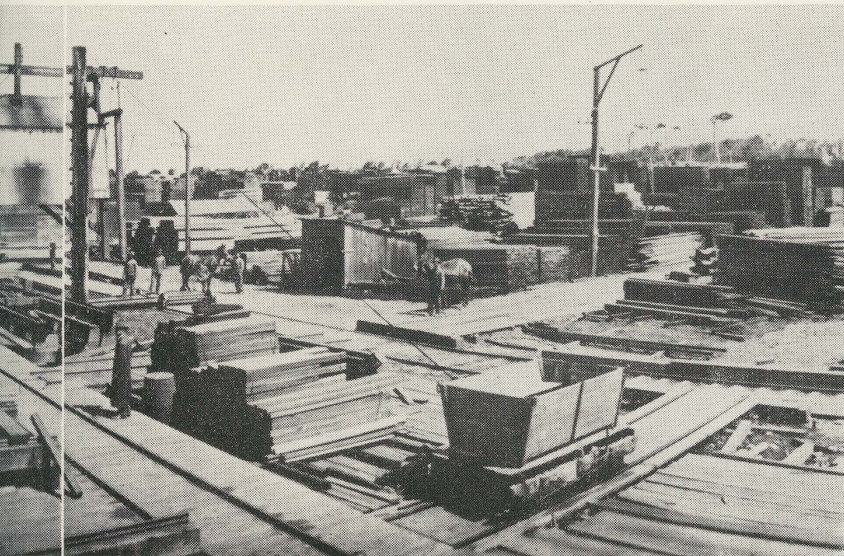
While the smaller landings had adopted the wire chute, the large lumber mills had continued to use slides for loading vessels. Their locations were well adapted for slides, the method was less damaging to boards (potentially), the managements were conservative, and then, too, the panic of the early 1890s had put a serious crimp in the lumber business. Once business picked up again and money could again be spent, and now that the continuous traveler line idea had been worked out, these companies finally converted to using wires.

As an example of such a large-scale operation, we will use the installation built at Caspar in the late 1890s, which remained in use for forty years until the company finally switched to using trucks to haul their lumber down below. This chute was designed and installed by the late Mr. C. J. Wood, then superintendent at Caspar, later the president of the Caspar Lumber Company.

The offshore part of the wire at Caspar was a two-inch galvanized iron wire rope shackled to a mooring chain that ran to a heavy anchor, which in turn was backed to a rock on the far side of the bay. The slip hook, of heavy galvanized stock, was secured to this offshore wire by an eye splice.

The inshore part of the wire was a one and a half inch steel wire rope ending in an eye splice; when not in use, this wire was reeled on a drum behind the chute house. Enough of the wire remained dangling from the headblock to allow the eye splice to be held at the edge of the platform, while the carrier was hung above it.

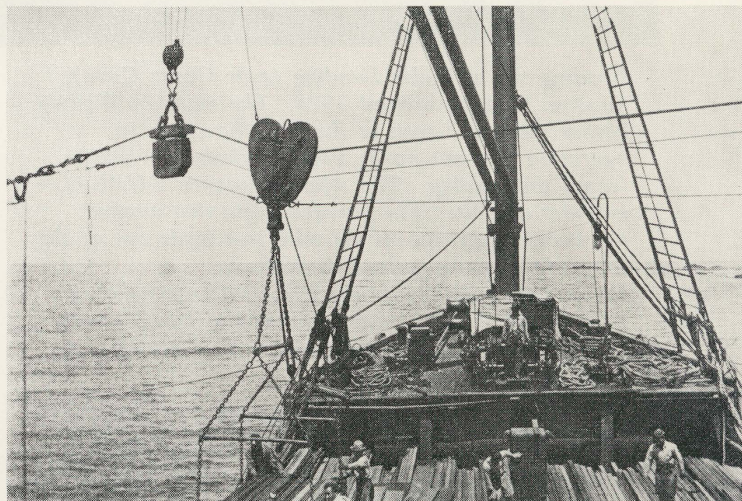
When a ship came in, it picked up the head mooring, swung on it and backed down; then two bow breast and



*Left: A panoramic view of the Caspar wire in operation, ca. 1910. Captain Arvid Andersen collection. Below: The second, wooden CASPAR (ex-CAPISTRANO) loading at Caspar, ca. 1915. Traveler, tail block and slip hook are all visible at the left of the picture. Captain Arvid Andersen collection. Bottom of the page: A view of the Caspar wire in the spring of 1904. The steam schooner SAMOA is loading. Beyond the wire installation is an abandoned slide chute. Caspar Lumber Company collection.*

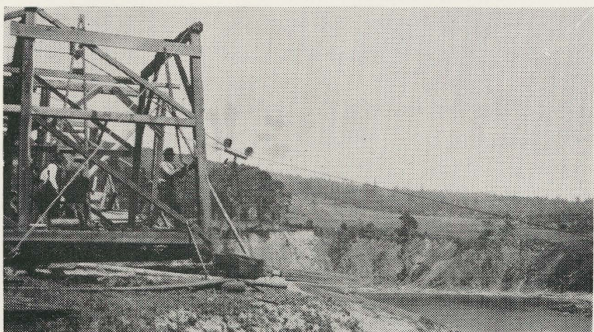
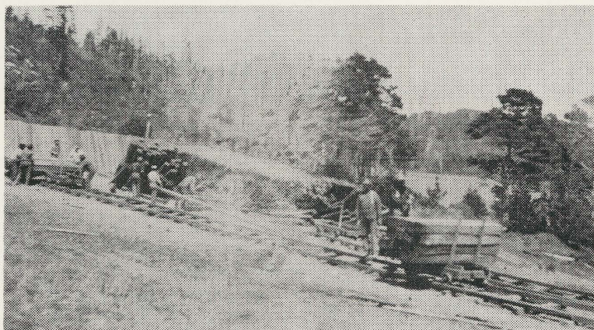
two stern moorings were secured. The watch buoy for the offshore part of the wire was fished up and the slip hook brought to the ship's boom. The workboat took a hauling line to shore for the inshore part of the wire, which was winched out to the ship, and then the wires were hooked together. As the inner end of the inshore wire came clear of the drum behind the chute house, it was then taken to the triple blocks at the deadman and secured; the blocks were then tightened until the wire was at its proper tension.

A hauling line brought from the ship now pulled out the pulley block for the ship's end of the traveler hauling line. This block was held with a heavy staple arched over a trough run in the top of the block for the wire to ride in;





*Loading ties at Walsh Landing (now Ocean Cove), Sonoma County, around 1908. The ruins of Walsh's earlier chute are seen at the left; the chute in operation was put up by Fred Linderman when he leased the landing. The steam schooner GUALALA is under the wire. The counterweight that worked the back-action ran on the wire that leads out of the lower right-hand corner of the picture. Below, the operation of the chute: 1) a slingload of ties is loaded on a car; 2) moved under the wire; 3) sent on its way to the ship. Photographs courtesy of John Linderman.*



at the ship, the staple was hooked to the boom, so that the wire could be raised and lowered as desired.

The chute house was a two-story affair, so that all the machinery was on the upper level, leaving the area underneath the house clear. Lumber was shoved in place under the wire on hand cars, and these, when empty, were turned on a table and run back up under the house into the yard for reloading.

The operating machinery consisted of a powerful donkey engine and three drums. One drum handled the line that raised and lowered the blocks hanging over the loading point, as required. The other two drums, one powered and the other an idler, handled the line that worked the traveler back and forth.

When loading was completed, the pulley block at the ship was pulled back in along the wire. The blocks at the deadman were slacked, while the ship's boom dropped the wire to lie on top of the deck load. The slip hook was then parted, letting the offshore part of the wire drop back into the water, while the inshore part of the wire was reeled in. A horse with a messenger line pulled the wire in, length by length; as it came in, it was wiped off with an oily rag.

The whole mechanism worked well from the start, very well, and justified the ten thousand-dollar outlay necessary to install it. Of course, regular and careful maintenance was necessary, and minor improvements were made on the basis of experience and of the availability of newer and better materials.

The inshore part of the wire, on which the traveler ran, got the wear, and had to be replaced regularly—every year or two depending on the volume of traffic handled. It was inspected each time it was pulled in, and there was always a spare on hand. The only other problem was to keep an eye on the stretching of a new wire and handle the adjustment of the blocks at the deadman accordingly.

The offshore part of the wire, not being worn by a traveler, lasted much longer; an average of ten years was the long-term experience of the landing, and it was examined once a year. As mentioned earlier, the terminal of the offshore end of the wire was backed to a rock on the far shore. This backing pulled out of the rock only once, but the crew of the company's steam schooner CASPAR never forgot it. It happened on a December 24th, and since

the company's schooner crew had to handle all marine maintenance at the landing, they were late getting home for Christmas that year.

Such was the Caspar wire. In a general way, this is the system used at the landings which used the continuous traveler hauling line method. Details in the arrangements varied from place to place, but not to any great extent for the most part.

Early installations of the wire chute were not limited to the area around Gualala where the St. Ores brothers first made the idea a practical success; within the first decade they were found as far afield as northern Mendocino County and Point Sal in Santa Barbara County.

In the 1880s and 1890s, the wires gradually displaced most of the slide chutes in California. This process was accelerated by the development of the steam schooner after 1880. This type of vessel, with its deeper draft, could not always come as close to shore in order to reach the end of a slide, as the sailing schooner had been able to do with its centerboard raised.

The larger operators of the Mendocino Coast had deeper water at their ports, or could maintain piers (as Albion and Union did), so it was in this area that the larger wires with continuous hauling lines were installed only around the turn of the century. Union Lumber Company never had one at Fort Bragg proper, since their wharf worked well enough, but they did install a double set of wires at the Noyo estuary in order to handle ocean-going tramps that came in for cargoes for overseas destinations.

The wires began to disappear after the First World War, when the loss of the market for redwood ties, to creosoted

fir ties, ended the need for the small landings. Besides, supplies could now be brought in easily by motor truck. Mendocino and Caspar, however, with no rail connections inland, continued to depend on the wire and the steam schooner for getting their lumber out.

The depression shut down the wires, but as conditions improved there was intermittent operation at Caspar until the sailors' strike of 1936-37. The resulting increase in wages drove ship operating costs up, but the real backlash came from the institution of the union hiring hall on a strictly rotational basis. The operators could no longer be sure of getting the same crew trip after trip, nor have any assurance that the new men they got from the hiring hall would know how to handle moorings and set up and work under a wire. This loss of efficiency drove costs up even more.

Mendocino's mill had been left shut down, since it was no longer needed now that trucks were capable of hauling logs from the Big River Woods to Fort Bragg; while at Caspar, the cost margin was now definitely in favor of trucking the lumber below.

So the end came in 1938, although the last chute was not actually dismantled until at the end of the Second World War, when it had become obvious that shipping lumber by water was no longer necessary, let alone economical.

Today, only a few signs are left of the old landings, such as the timber foundation for part of the chute house on the point at Mendocino, and some scattered pieces of back-action chute frames at locations on private property not visible from the Coast Highway.

*The Union Lumber Company's double wire at Noyo.*

*The ship is being simultaneously loaded fore and aft. Union Lumber Company collection.*



About the author of *Loading by High-Line*:

Richard H. Tooker first saw California's Mendocino Coast ten years ago, and although he had no nautical or mechanical background, his curiosity about loading operations in the coast's outside ports spurred him to do research on the subject. With the encouragement of Mrs. Nannie Escola of the Mendocino County Historical Society (of which he soon became a member) and the response of many old-timers to his questioning interviews, Mr. Tooker has gathered the material for this present summary.

## Correspondence

"They started to roost on the crossjack yard . . ."

To the Editor:

I note what you had to say about the *Balclutha* ("Notes from the Museum," August 1966). Now I do not think that parrots were so plentiful on board the ships in the last days of sail as is imagined. Of course I have not seen everything. But I think pirate stories made the parrot so much more abundant.

But many, like myself, were fond of canary birds. I had quite a few on the *Chin Pu*, and I had two all throughout the last years of the last war on board of the *Apache Canyon*. With me on the same deck there only lived the radio operator, and he was fond of birds, too. Holloway was his name, and he had been a technician on a broadcasting station in New York. And as fond as he was of birds, he was just as fond of booze. He was a good man. You ought to have come on the bridge of the *Apache Canyon* about five o'clock in the morning and hear those birds going to it. It always gave a lot of pleasure to the mate on watch and the man on the wheel.

Of course many a ship had chickens. But some of them had pigeons. And I recall the Swansea full-rigged ship *Poseidon* at Antofogasta in 1907 or 1908. It was on a Sunday that she caught fire partly loaded with nitrate. The hatches just blew right up. The captain had two daughters; they all were ashore when the fire started. And they had pigeons. The fire disturbed these birds, and they started to roost on the cross-jack yard of our ship, the *Anna*. It took a few nights before we could catch them. Our mate was a great lover of all kinds of animals (Gau, his name was), and so we made room for them in the hen coop. It did not take very long before they made the *Anna* their home. I think we had two pairs; they were white with brown wings. Before we came to Australia, we had all kinds of doves. It was great to see them cruising high over the mastheads on a fine day. The old birds knew that it was dangerous to approach the ship from leeward and get into the downdraft of the sails, and sometimes we lost young birds that way. But I never was shipmates with a parrot. . . .

CAPTAIN FRED KLEBINGAT  
San Pedro, California

"Slowly the scow rounded to . . ."

To the Editor:

Thank you and everyone else concerned with the SEA LETTER that features the scow schooners. What a wonderful boost I got out of that!

When I was a boy on the *Florence* in 1895, the tugboats of San Francisco ranked number one in my affections when it came to watching harbor craft. No birdwatcher ever worked longer hours or was more engrossed in his hobby than I was. I was up at my post before the dew had dried from the quarterdeck rail, and I left it only to ease the pangs of hunger, which came so frequently that a snack or two was needed between meals. I could take in a rich panorama from our

Harrison Street berth—far up toward the Ferry Building, including the routes of the Oakland and Alameda ferries, and the transbay terminals with the white hulls of the boats off-duty. Tugs came and went to replenish bunkers, and, if I was having a particularly lucky day, brought deep-water sailing ships and docked them in near-by slips.

Scow schooners were in a minority in this rich cast, but I had great interest in them and their doings, for they moved by sail as did the *Florence*, and the problems of their crews were to fight the same battles that filled our days: tides, calms, squalls, questions of right-of-way. Sail-handling can be a fine art; bringing a sailing craft into a loading slip without tug or auxiliary power with a tide running is no Saturday afternoon yachting holiday. I appreciated high-grade seamanship exhibited. I had no such skill, but like an opera follower, I knew good music even if I couldn't sing.

Until I read the SEA LETTER I had no idea where these scow schooners picked up their cargoes or where they took them. Now that I know of the trips they made up narrow waterways in the remote up-river regions, I appreciate what I saw all the more.

Harrison Street pier was not a great ways from the Third Street hay dock, which I knew nothing about at the time, but I believe now that some of the schooners that passed within easy viewing distance must have been inbound or outbound from there.

I remember one day when I happily watched one of these scows getting the last ounce of power out of the fading gasps of wind while the tide was sweeping her slowly off-shore.

A trailing skiff was pulled alongside. A man slid down into her, was handed a rope's end, grabbed an oar and started to scull valiantly for a receding pierhead. His shipmate payed out the line. Reaching the wharf, he made fast the rope to a piling and sped back to his ship. He climbed aboard, then ran forward and joined his partner at the winch.

Slowly the scow rounded to and crept slowly toward the pierhead. The pawls clinked an accompaniment as the dripping line came over the bow. The wind had died.

Reaching the dock, the two men made their schooner fast to wait a wind or the turn of the tide. Smoke began to come from the scow's cabin stove pipe. A smell of frying meat floated over to me. It brought me to my senses. I hadn't eaten for two hours! Four bells struck from our cabin clock, and I ran below for supper.

FRED B. DUNCAN  
Holland, Michigan

To the Editor:

In preparation of a manuscript on Josiah Knowles, early San Francisco shipmaster and merchant, I am seeking the following: information on or a photograph of the New London-built bark YANKEE, owned in San Francisco in the 1860s. Any information your readers have would be greatly appreciated.

DAVID HARVEY  
404 East 66th St.

New York, New York 10021

**SEA LETTER** is sent to all members of the San Francisco Maritime Museum, a private, non-profit historical society. The museum is supported almost entirely by its ship BALCLUTHA, at Pier 43, and by its members. Interested non-members are cordially invited to join the museum to help support its program of the preservation and display of Pacific Coast maritime history.

—ANITA V. MOZLEY, Editor